WE CLAIM:

1. A bandpass filter for a transmission system that operates with different communication protocols that require different frequencies, the bandpass filter comprising:

a cavity capable of resonating at a first frequency, when cavity parameters are in a set of first conditions, and at a second frequency, when the cavity parameters are in a set of second conditions;

a movable facility within the cavity for selectively affecting the condition of the parameters of the cavity pursuant to the respective positions thereof; and

apparatus for selectively moving the movable facility in response to a signal from a remote location.

2. A bandpass filter as in Claim 1, wherein:

the affected parameters are bandpass Q and insertion loss.

3. A bandpass filter as in Claim 2, wherein:

the movable facilities include an electrically conductive plate movable within the cavity to change the length and, therefore, the Q thereof.

4. A bandpass filter as in Claim 2, wherein:

the movable facilities include a non-air dielectric element movable within the cavity to alter the Q thereof.

5. A bandpass filter as in Claim 4, wherein:

the movable facilities include an electrically conductive plate movable within the cavity to change the length and, therefore, the Q thereof.

6. A bandpass filter as in Claim 1 wherein:

the affected parameters are bandpass characteristic and center frequency.

7. A bandpass filter as in Claim 1, wherein:

the broadcast protocols are AMPS/TDMA at 30 kHz and EDGE at 200 kHz.

8. In a cellular telephone system having a base station which includes an antenna and two transmitters each of which is compliant with a respective broadcast protocol, a bandpass filter for connecting the antenna to the transmitters, which comprises:

a cavity capable of resonating at a first frequency, when the parameters thereof are collectively in selected first conditions, and at a second frequency, when the parameters thereof are collectively in selected second conditions, the first frequency being compatible with one of the broadcast protocols and the second frequency being compatible with the other protocol;

one or more movable facilities within the cavity for selectively affecting the condition of the parameters of the cavity pursuant to the respective positions thereof; and

apparatus for selectively moving the movable facilities in response to the receipt of a move command from a location which is remote from the base station to effect the assumption by the cavity parameters of the first selected conditions or the second selected conditions.

9. A bandpass filter as in Claim 8, wherein:

the movable facilities and the selective moving apparatus comprise

individual elements, movement of each of which affects a parameter of the cavity; and

a prime mover associated with each element for movement thereof in response to energization thereof.

10. A bandpass filter as in Claim 9, wherein:

each prime mover comprises a selectively energizable electric motor connected to its element and mounted with respect to the cavity so that energization of the motor translates the element.

11. A bandpass filter as in Claim 10, wherein:

one or more prime movers may be selectively, individually connected to plural elements by the move command.

12. In a cellular telephone base station having plural transmitters, a group of N bandpass filters phased together and employable to interconnect an antenna to the outputs of the transmitters, each of which transmitters is compliant with one or the other of two respective broadcast protocols, each filter comprising:

a cavity capable of resonating at a first frequency, when the parameters thereof collectively assume selected first conditions, and at a second frequency, when the parameters thereof collectively assume selected second conditions, the first frequency being compatible with one of the broadcast protocols and the second frequency being compatible with the other protocol;

one or more movable facilities within the cavity for selectively affecting the condition of the parameters of the cavity pursuant to the respective positions thereof; and

apparatus for selectively moving the movable facilities in response to the receipt of a move command from a location, which is remote from the base station, to effect the assumption by the cavity parameters of the first selected conditions or the second selected conditions, so that a number, X, of the cavities resonate at the first frequency and N-X of the cavities resonate at the second frequency, X being from zero through N, and the antenna's transmission is made up of X/N of the first frequency and (N-X)/N of the second frequency, the antenna accordingly being capable of transmitting from 0% to 100% of each frequency in increments of 1/N%.

13. A group of bandpass filters as in Claim 11, wherein:

N=4, and X varies from 0 to4.

14. A dual mode combiner employable to interconnect an antenna to two transmitters each compliant with a respective broadcast protocol, which comprises:

a cavity capable of resonating simultaneously at a first frequency and a second frequency, the first frequency being compatible with one of the broadcast protocols and the second frequency being compatible with the other protocol;

one or more first movable facilities within the cavity for selectively affecting the condition of the parameters of the cavity pursuant to the respective positions thereof so that if the capacity of the cavity for one of the frequencies is X%, the capacity of the cavity for the other frequency is !00-X%;

one or more second movable facilities within the cavity for selectively affecting the condition of the parameters of the cavity pursuant to the respective positions thereof so that the center frequency of the cavity's bandpass characteristics may be adjusted; and

apparatus for selectively moving the movable facilities in response to the receipt of a move command from a location, which is remote from the cavity, to effect the assumption by the cavity parameters of the first selected conditions or the second selected conditions.

15. A method of accommodating multiple communication protocols in a base station, the method comprising:

tuning multiple bandpass cavity filters to one or more desired frequencies;

sending a signal to a selected bandpass cavity filter requesting a change in physical characteristics of the bandpass cavity filters; and

retuning the selected bandpass filter based on the signal to change its bandpass frequency response.

16. A cellular base station comprising:

a plurality of transceivers;

a plurality of corresponding power amplifiers coupled to the transceivers;

an antenna;

an autotune combiner network having multiple bandpass cavity filters, wherein at least one bandpass cavity filter further comprises:

a receiver that receives tuning commands from a remote location;

a tuning plate responsive to the receiver; and

a telescoping tuning housing responsive to the receiver.

17. The cellular base station of claim 16 and further comprising a stepper motor coupled to the tuning plate for moving the tuning plate responsive to the receiver to change Q of the bandpass cavity filter.

18. The cellular base station of claim 17 and further comprising a coupling tuner coupled to the cavity of the bandpass cavity filter for adjusting the Q of the bandpass cavity filter

19. The cellular base station of claim 16 and further comprising a tuning motor coupled to a tuning actuator for changing the length of a neck in the cavity filter.

20. The cellular base station of claim 19 and further comprising a feedback loop for fine tuning the bandpass characteristics of the bandpass cavity filter.